2.7 Improving the IT Service Model

Major Issue: There is considerable dissatisfaction with the current model and practices of providing IT services to users on campus. Four main issues have emerged:

1. The hierarchical model of support with one point of contact does not meet the needs of many of the users, especially those with high levels of expertise;

2. Policy is set by the same people who provide support and services. Users have no clear way to influence support policies with which they disagree. The issue of policy and governance must be decoupled from the issue of providing services;

3. There is a lack of appreciation for the diversity of the customer base and for the diversity of the needs of the customer; There is a need to develop an understanding of the user’s point of view in order to meet the expectations and needs of the user;

4. There is a lack of transparency (the black box approach) that destroys trust in the system

A. Background

Significant portions of the campus do not have adequate IT support service because they cannot afford to purchase services offered by central ITS as it is now organized. Too much of the current “4-tier” model depends on enrolling people who are not IT support experts (e.g., the mandated Tier 2 contact people). Experts in distributed units outside of the ITS organization are expected to enter at Tier 1 rather than communicate with directly with appropriate experts inside of ITS. This problem is exacerbated by the current hub (ITS) and spoke (the distributed customers) model of support because efficient and effect use is not made of the expertise of people in other units on campus. ITS currently has a classic hierarchical structure typical of a corporation. This structure has advantages of clear lines of responsibility but suffers from inefficiency because of the isolation of the lower level people from each other. Communication flows vertically not horizontally. Thus knowledge cannot be easily shared with those who might benefit most from it. Another characteristic of this structure is that authority to make decisions is always limited by the next level up.

The organization of the organization of the four-tier support system currently in place reflects this same corporate organization structure. It is characterized by a vertical flow of
information and a lack of transparency about the internal workings.

This hierarchical corporate structure stands in contrast to the functional organization of typical academic units such as departments and institutes. These units are better described as a rich interconnected network of people with very little rigid reporting structure. One consequence of this network structure is that faculty and staff are able to communicate with whomever they need to in order to collaborate and achieve their goals both within units and across units. Such a structure is relatively transparent because each individual has multiple ways of gaining information from others in the group. Such a structure is flexible because most of the connections among people are based on need to communicate (for example to carry out a research project or teach a course). When needs change, the connections change.

These very different organizational structures have led to serious mismatch of expectations, assumptions, and beliefs held by the staff of ITS about those it is mandated to serve and visa versa. This mismatch has led to an inefficient use of resources and expertise on the campus. There are many on campus, both IT professionals and others, who have a very high level of knowledge and expertise about information technology who are not employees of the ITS organization. This expertise is currently underutilized by ITS staff largely because of the rigid organization and hierarchical support model and because of a cultural attitude towards these “outsiders.”

The current support model isolates people working in central ITS from the people they are serving, both distributed IT support staff (e.g., Housing, UMC, academic departments) and actual end users. Although ITS managers might meet with administrators in different units, the staff in central IT are relatively isolated from, and are not familiar with, the nature of the research, teaching, and other work that is being done in the academic departments and other campus units. Mechanisms, procedures, and policies within central ITS discourage the ITS experts from engaging in conversations and collaborations with those outside of ITS. In addition, there needs to be more transparency in the functioning of the ITS support model. There is not sufficient collaboration among the different units and service providers nor is there enough sharing of knowledge to avoid the problems outlined here. There is not enough flexibility in support offerings, and more recognition that determining these levels should be a product of collaboration not dictation.

Finally, there are difficulties with scope—it is not clear who owns which responsibilities and services. Yet, at the same time (and because of this), there are significant relational difficulties and organizational mistrust, because the central unit (ITS) advocates to perform services located in the different units (competing for resources and budget with the very people they also promise to support). This competition for resources makes cooperation and trust more difficult.

B. Accomplishments to Date

ITS currently operates a call-in Service Center that receives approximately 60,000 calls per year. Approximately 70% of these calls do not get escalated to anyone else in ITS; ITS also operates two walk-in service centers that provide support for faculty, staff and students;
The service structure that is now in place is a hub and spoke structure. ITS is positioned at the hub and has a series of support agreements with many units on campus. These connections radiate from the hub out to the units like the spokes of a wheel.

ITS personnel are highly motivated and competent information technology professionals. The problems that we have identified do not reflect on the people, but rather on the organization and structure of how ITS interacts with the many different units on the campus that they are to serve. It is this organization that we recommend changing;

**Action Plan**

**A. Explicit Assumptions On Which This Plan Is Based.**

We need to separate governance from the provider providing the technology. Governance represents the business aspect and is concerned with establishing policy. Technology provides services. Establish a policy/oversight board that reports to the CIO. This board coordinates policy of ITS and other IT units so that the needs of all users are met. As a general principle, this board would not be made up of the same people who are providing services. The chair of this board should not be the same person who is running ITS services.

We agree that the mission of the university is to achieve excellence in education and research. ITS’ own mission should be to support the mission of the university. The role of staff is to help units within the University carry out the mission and achieve the goal of excellence. The University mission is our central, shared focus. The functioning of the University requires high degree of flexibility and adaptability, because practices and needs vary widely across different disciplines and units (one size does not fit all).

We agree that every unit is to be supported at a level that meets their basic needs. A support model should not depend on a unit’s ability to pay in order to achieve this basic level of support. A call center in and of itself is not a sufficient level of support. Similarly, the more that the support staff understands and is familiar with the particular work that is being done by those they support (faculty, staff, students), the better able they are to support those user. Quality support depends on familiarity with the end user and his/her work.

There must be a recognition of and respect for the "expertise across campus" and of the importance of area or content knowledge (that needed expertise cannot be centralized). All support staff on campus must actively work to establish trust among them, particularly when the relationship requires one unit to be dependent on the services provided by central ITS. There must be a respect for boundaries of existing support groups, and a recognition of support staff across units as peers.

Support staff in distributed units must accept that elevated access (i.e. the ability to bypass parts of the work flow) also means certain elevated responsibilities relating to troubleshooting and correctly identifying a problem. Managing these expectations and privileges will be a challenge for everyone involved.

There must be transparency in the system, especially in how to prioritize resources, cost-modeling, and decision-making. More transparency is needed about what services are provided by support units and how they are provided. It must be easy to track the status of reported problems through the system.
Scaling must be part of the logic, including a shared understanding of how to prioritize services (for example, not every need can be the highest priority). The goal of our recommendations is to unfold ITS to make it more transparent and to align it with the mission of the faculty and staff.

B. Specific Recommendations

1. Reduce the mission of current ITS organization to focus on what it does well—to emphasize its strengths in providing IT infrastructure technology. To make a break with the past, the name of the new unit should be changed to reflect this new focused mission (e.g., ITI–IT Infrastructure).

The three core services should be:
- a. Developing and maintaining the campus networks and servers
- b. Supplying central support for campus users (help desk and higher level support)
- c. Developing and maintaining central computing spaces to house server and other specialized computing equipment

2. Create new and separate units out of the current ITS organization to provide specialized expertise (e.g., Security, Research Computing, Academic Technology, Classroom support) in specific areas needed by the campus. These units, like the new, reduced ITI, would implement policies set by the IT Policy board established in recommendation 3;

3. Establish an IT Policy and Oversight Board that reports to the CIO. This board will develop policy for ITS and coordinate policy with other IT units so that the needs of all users are met; The board will strive to make the campus IT community more cohesive and to reduce conflicts. The chair of the board would not be the director of the new ITI (or the other units, see number 3) to avoid conflicts of interest. The function of the board is to set policy, not to deal with daily operational issues. The membership of the board should be drawn from the campus administration, faculty and staff;

4. Develop mechanisms to **significantly increase and sustain** involvement, communication, coordination, and collaboration among all relevant units on campus to leverage distributed expertise. Ownership of the mechanisms needs to be shared, rather than controlled by one central unit. Develop mechanisms for discussions of non-urgent issues on a regular basis.

5. Establish a different working relationship between the different service providers, especially between a central IT service provider and the different levels of end users (including support staff). Develop a rotation system in which key ITI personnel serve in appropriate units and other IT (e.g., Housing) personnel serve in ITI.

6. Develop ways to prioritize for 24/7 escalated service; develop a model of how some levels of service could be provided;
7. Develop mechanisms for staff or units to request more coverage of service than they currently have.

C. Short and Long Term Objectives

1. Immediate Objectives

- Establish a policy board as recommended in 1 above.
- Begin an assessment of the needs of the diverse pool of users on campus with the aim of gathering information about the specific nature of the work (teaching, research, administrative support) within units. Needs change and should be frequently assessed. The results should be communicated to relevant support staff, and mechanisms should be established for those support staff to follow up by themselves communicating to users and unit support staff.
- Begin evaluation of options to provide some form of 24/7 help service by phone or email for the most important services such as network. Develop reasonable guidelines for what is an appropriate after hours service call. Leverage Tier 2/support staff as a resource to help extend service beyond business day (e.g., local staff could filter the service requests so that central IT staff might simply be "on call.").
- End the practice of making pronouncements of infrastructural changes, especially in situations where substantial number of users will be affected. Create a web page where these proposed changes can be made public and where policy input can be given. Detailed technical information about changes to services provided, including new services, should be available to end users who are relying on those services. Keep the campus informed of project schedules.
- Rethink the way SupportWorks is used in order to increase its utility to all units on campus. Open access to the system to non-ITI support staff–make it an campus resource rather than an ITI resource. The object is to use support resources more efficiently because local staff could handle some of the case load, and could also add their knowledge. A shared web portal could be another option. At the very least, there should be a way for support staff in units to communicate with each other and back to central ITI with regard to applications, services, hardware, etc., especially if the unit is deploying services that may have an effect on central services.
- Provide more open access to elevated support levels and ITI experts.
- Place online information that would be useful for support staff across campus to know, and make it accessible to support staff across campus. Limit or end the practice of holding information as a central resource. For example, make available more information on campus software site licenses, along with details regarding the terms of use (End User License Agreement - EULA) and contact information, for the license holder and vendor.

2. Short-Term Objectives

- One of the objectives of the needs assessment (from #1 above), should be to identify potentials to offer standard hardware or software configurations, or to link units that have similar hardware/software needs. In other words, to assist the campus with achieving efficiencies through standardization. (However, this does not mean to try to fit all uses within a standard.)
- Rethink the model and the process for software licensing. Re-assess who should own the process (need a model that is flexible and has variation, for times when more efficient for a non-ITI unit to lead.).
• Rethink the cost models for support services, e.g., rather than linking positions to computers supported, link them to actual work performed. Look for potentials to reduce marginal cost for each user supported.

• Institute campus conversations and involvement about what services different units find are most valuable for customer support and which set of that support common to all. Rather than having "effective customer support" defined primarily by central ITI, the decisions about what central resources the campus should invest in (e.g., what email service, web services, network services, security services) should be made by the IT Policy Board with effective input from the whole campus.

• Consider a funding model that involves a sliding pay scale for central services (i.e., to subsidize units with lower budgets).

• Coordinate procedures for academic units to cooperate with technology support staff with regard to reporting needs that need fixing, and develop ways to coordinate among support staff and central ITI to determine who is responsible for the need.

3. Long-Term Objectives

• Rethink campus relationships between support staff. Create a system that increases communication among relevant people in different units across campus.

• Accountability -- develop outcomes based assessment not only for specific services, but for system/structural elements as well. (i.e., to assess decisions made about how to do things). And provide mechanism to feed these back into the system to improve it.

• Continue discussions involving faculty, staff, and students all together to determine reasonable expectations for minimum level of support. Do not depend on central IT to make that decision in isolation. Build feedback -- communication--into the system so that it can better meet the needs of units and end users, while maintaining openness and transparency.

D. Possible Risks

Any organizational change poses risks that the new organization structure will not achieve its goals and that the net impact on the campus will not be positive. We believe, however, that the current situation is far from optimal in terms of supporting the academic mission of the university. Since we are not recommending elimination of functionality and services but a reorganization of how they are achieved, we believe that the risks of implementing the recommendations are very low. The potential benefit is an increase in user satisfaction across campus and a higher level of support for the university mission.

E. Resource Allocation

For the most part these recommendations are resource neutral. The recommended changes are largely organizational and structural in nature. They will result in a better use of existing resources because personnel will focus on doing what they do best and will not be operating outside the bounds of their expertise.

The two exceptions are the recommendation that some form of 24/7 help be made available and the expansion of the SupportWorks license. The current ITS administration has made one preliminary estimate of the cost of these additional services using an outside vendor, but this committee has not done an in-depth analysis the estimate nor evaluated the costs and benefits of providing the help service internally or externally. How much these recommended changes
would cost depends on the specific implementation chosen. This choice of how to implement the recommendations should be made by the CIO and the Policy Board. The CIO would then include this cost as part of the budget request process.

F. Responsible Parties

Policy will be set by the campus administration, specifically by the Chief Information Officer/Associate Vice Chancellor with the guidance of the policy board.